**EDC LAUNCH CRITICAL SCENARIOS**
**Pre-Certification Test Activity Matrix EDC DAAC**

Pre-Certification Test Activity Matrix is prepared for the EDC DAAC to examine the extent to which the SV tests and Acceptance Tests (A/Ts) meet the pre-requisite test activities. The matrix is based on the DAAC Operations Rehearsal Scenarios, the SV and A/Ts, which are traced to the scenarios by ECS, and include reference to EGS-DAAC External Interface and Certification System Level Tests..

The SV and A/Ts have been reviewed for applicability and completeness with reference to meeting the certification pre requisites. The test activity matrix will be updated as required, when the SV and ATs are updated and the operational procedures are completed by the DAAC. The test activity matrix will be used to identify the functions if any, where the SV and A/Ts fall short of verifying the scenarios so that appropriate actions can be taken by DAAC/EGSI&T to ensure that ICT and EGS tests verify these functions. This matrix will be used as a "check-off" list to track and evaluate the extent to which the prerequisite test activities required for execution of the joint DAAC - EGS I&T Science & Operations Certification Tests have been completed prior to the certification test period

**Preparation of Test Activity Matrix**

Operations Rehearsal Scenarios identified for EDC DAAC formed the basis for identifying the tests to be completed as part of pre-certification activities. The procedure for preparation of the Test Activity Matrix is:

1. Identify all Launch Critical Rehearsal Scenarios
2. For each scenario, obtain details of all SV and ATs which are identified by ECS as applicable to the scenario.

(The data used for this purpose is as supplied by Glen Iona on 12/12/97. In some cases where the details of the ATs are not available, the information from 11/24/97 version is used.)

3. Identify the relevant EGS Certification tests for each scenario
4. Identify the relevant EGS ICT Interface tests for each scenario
5. For each Acceptance Test identified in step 2 above, review the scope, expected results, acceptance criteria, and provide comments for additions and changes as necessary.
6. Review the scope of all the SV and A/Ts traced to each scenario 'as a group' and specify if they completely test the scenario; if not identify the parts of the scenario not addressed by the SV and A/Ts.

**The Test Activity Matrix.** Prepared using the results of this analysis/review is presented in Attachment - 1

# EDC LAUNCH CRITICAL SCENARIOS
## ATTACHMENT 1 PRE-CERTIFICATION MATRIX

| Scenario | Task/Activity/Operation | SV/AT Test Number<br>ICT Test Number<br>Operations | Status of SV/AT Test | Comments on the Expected Results, Acceptance Criteria (SV/AT) | Remarks | Relevant EGS Test | Status | Relevant Operations Procedures |
|---|---|---|---|---|---|---|---|---|
| **E-LC-1** | **ETM+ L-7 LOR Ingest and Archive.**<br>This scenario exercises: 1) the ability of EDAAC ECS to receive data shipping notice, 2)Ingest inventory, and archive LPS L0R data/metadata; 3) ECS to acknowledge receipt of the data. the ability to combine Format 1 and Format 2 data. | **Push - B090410.010$E**<br>This procedure verifies the capability of the EDC ECS DAAC to receive Data Availability Notices (DANs) from the LPS concerning the availability of Landsat L0R data. Additional verification is made to ensure the ability of the EDC ECS DAAC to ingest, validate, and archive the L0R data. | | The ATs cover the scenario well. | | **EGS5** | | |
| | | **E to E -B120650.10$E**<br>The LPS and IGS Data Ingest and Archiving test case verifies that the EDC DAAC ingests and archives Landsat 7 Level 0R data and associated metadata and browse data received from the LPS (Landsat-7 Processing System) as well as inventory metadata and browse data received from IGSs. The inputs to this test case include Landsat 7 Level 0R data and associated metadata and browse data provided by the LPS via Ebnet as well as inventory information and browse data provided via physical media by a Landsat 7 IGS. | | | | | | |
| | | **E-ICT8** | | | | | | |
| **E-LC-2** | **User Registration**<br>This scenario exercises: 1) the use of ECS Client to register new users; 2) the use of the ECS Client to test privileges established for the new users; and 3) WEB base user login and authorization. | **SV-TC0065**<br>This test verifies the ability of the accountability Management Service to allow M&O staff to 1) modify, delete and receive user profile records, 2) receive and send requested user profile data to/from M&O and ECS applications, 3) create a new user account for records added to the user profile database, and 4) provide the user with registration approval results when new ECS user accounts are requested. | | Based on the review of the scope, expected results, and acceptance criteria, the ATs appears to be adequate enough to ensure that this scenario as stated, is covered. | All of the parts identified in the scenario, have been sufficiently addressed in the ATs. | **EGS5**<br>**EGS9** | **2/4/98 –** All functionality for this LC scenario has been delivered and tested. | |
| | | **Pull - B100110.010$E**<br>This test verifies that ECS is accessible to the users via network connection (TCP/IP or NSI) and direct connection (the client is installed on the user's workstation). Also, this test verifies the user registration process for a ECS client user, and the user profile modification. This test covers doing only very basic searches and the access to other Desktop services. | | | | | | |
| | | **E-ICT8** | | | | | | |
| | | **E-ICT12** | | | | | | |

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| Scenario | Task/Activity/Operation | SV/AT Test Number<br>ICT Test Number<br>Operations | Status of SV/AT Test | Comments on the Expected Results, Acceptance Criteria (SV/AT) | Remarks | Relevant EGS Test | Status | Relevant Operations Procedures |
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| **E-LC-3** | **ETM+ LOR and ASTER L1a/L1b Data Query, Browse and Order.**<br>This scenario exercises: 1) using ECS Client from the Image Assessment System (IAS) console generate a hit list from a query; 2) browse L0R data/images/metadata; and 3) select items from the hit list to order. | **Pull - B100110.010$E**<br>This test verifies that ECS is accessible to the users via network connection (TCP/IP or NSI) and direct connection (the client is installed on the user's workstation). Also, this test verifies the user registration process for a ECS client user, and the user profile modification. This test covers doing only very basic searches and the access to other Desktop services. | | Browse L0R data/images/metadata is not verified. FTP browse only available in 2.0 | Verify browse capability. | **EGS5**<br>**EGS9** | | |
| | | **Pull - B100130.040$E**<br>This test verifies the interoperability between ECS and the Version 0 System. This test verifies that a Version 0 user can simultaneously access data from ECS and V0 DAACs | | | | | | |
| | | **E-ICT8** | | | | | | |
| | | **E_ICT12** | | | | | | |
| **E-LC-4** | **Request Level Order Tracking (OPS Production Request Tracking)**<br>This scenario exercises the ability of EDAAC ECS to track order requests at a high level (granule level tracking is not LC during this time period). | **SM - B080150.010$E**<br>Demonstrate that M&O interfaces, provided for EDC ECS DAAC subsystems are accessible and functioning and that these interfaces are sufficient to support planned operations and maintenance activities. | | Pull - B100110.100$E – The ability to change standing orders needs to be tested. | Both of these tests need to be coordinated in order to fully test the scenario as stated. | **EGS5**<br>**EGS9**<br>**EGS10** | | |
| | | **Pull - B100110.100$E**<br>This test verifies the ECS provides the user with the capability to view information pertaining to orderable data products and formulate a request for the selected data. | | | | | | |
| | | **E-ICT8** | | | | | | |
| | | **E-ICT12** | | | | | | |

# EDC LAUNCH CRITICAL SCENARIOS

| Scenario | Task/Activity/Operation | SV/AT Test Number<br>ICT Test Number<br>Operations | Status of SV/AT Test | Comments on the Expected Results, Acceptance Criteria (SV/AT) | Remarks | Relevant EGS Test | Status | Relevant Operations Procedures |
|---|---|---|---|---|---|---|---|---|
| **E-LC-5** | **ETM+ WRS Scene Sub-setting**<br>This scenario exercises: 1) EDAAC ECS subsetting of L-7 scenes into Worldwide Reference System (WRS) scenes; 2) distribution of WRS scene data from subintervals; 3) the ability to combine Format 1 and Format 2 data. | **Pull - B100110.100$E**<br>This test verifies the ECS provides the user with the capability to view information pertaining to orderable data products and formulate a request for the selected data. | | However, the scope and intent of "ability to combine Format 1 and Format 2 data "mentioned in the scenario is not clear. | B100110.100$E – No verification is done to ensure that the data that was received is actually what was requested. This needs to be done.<br>B120650.030$E – Steps 150, 310, 470, and 620 state, "Copy files to home directory for verification," but no where thereafter is it verified that the data files received actuall contain the requested data.<br>The AT verifies that the LOR Format 1 and Format 2 data are received in EDC. Review the scope and intent of "ability to combine Format 1 and Format 2 data" in the scenario and ensure that is covered by the AT. | **EGS5** | | |
| | | **E to E - B120650.030$E**<br>The ECS User Access to Landsat 7 Information and Products test case verifies that the ECS processes user requests for Landsat 7 products and information and distributes the products and information requested. | | | | | | |

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|---|---|---|---|---|---|---|---|---|
| **E-LC-6** | **Data Staging for FTP**<br>This scenario exercises: 1) EDAAC ECS data set-up for FTP pickup. | **SV - TS0830.1**<br>This test demonstrates the ability for Data Server Subsystem to distribute data to a specified pull location. Upon an Ftp Pull destination request and after data retrieval from the archive, data is copied to a designated common system location so the user can copy (or "PULL" the data) to the user workspace. The user receives an e-mail message providing the necessary path and file naming information detailing retrieval of the data. Data is verified by comparing the file size of the data in the pull directory to the file size of the data in the archive, and by executing a diff command on the two data files. There is a time limit set in a configuration file in which data is available in the "pull" area. After the time limit has expired the data is deleted. This data deletion is performed by the staging monitor server. Nominally, the time limit is set for 24 or 36 hours. The designated time limit will be changed to a shorter period of time to test the ability of the staging monitor server to delete the data files. Several distribution requests are submitted. Appropriate messages of the receipt of distribution requests are received. Error conditions tested include attempting to access and pull data requested by another user and requesting invalid data. | | The SV tests appear to completely cover the scenario stated. | All the parts identified in the scenario, have been sufficiently addressed by the SV tests. | **EGS10** | **2/4/98 –** All functionality for this LC scenario has been delivered and tested. | |

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|---|---|---|---|---|---|---|---|---|
| | | **SV - TS0830.2**<br>This test demonstrates the ability to "Push" data to a specified destination. An electronic distribution request is submitted for data to be placed in a directory outside the DAAC. The data is copied to the user disk location specified in the request. User will receive e-mail stating that distribution is complete. . Data is verified by comparing the file size of the data in the pull directory to the files size of the data in the archive, and by executing the diff command on the two data files. Several distribution requests are submitted. The tests will "push" the data internally to ECS and externally. Operationally, the FTPPush capability will be used within ECS by the PDPS subsystem when acquiring data used in PGE processing. Error tests will include: attempting to send data to a non-existent directory, the user supplying an incorrect password, attempting to distribute data to a directory that is write inaccessible, and attempting to distribute non-existent data. | | | | | | |
| **E-LC-7** | **Ingest and Archive of IAS Data Calibration Data.**<br>This scenario exercises EDAAC ECS ability to ingest and archive data provided by IAS for time interval, i.e., calibration parameter files. | **Push - B090410.020$E**<br>This procedure verifies the capability of the EDC ECS DAAC to poll a specified directory for the Calibration Parameter Files (CPFs). Additional verification is made to ensure the ability of the EDC DAAC to ingest, validate, and archive the CPFs. | | | B090410.020$E – To verify that data have been archived, it is not sufficient to simply look at logs and metadata. The actual data needs to be retrieved from the archive. | **EGS5** | | |
| | | **E to E - B120650.020$E**<br>The ECS Interfaces with MOC and IAS test case verifies that the ECS provides the MOC with Landsat 7 metadata, provides the IAS with Level 0R data, and ingests and archives calibration information received from the IAS. The inputs to this test case include ECS tools/displays for requesting Landsat 7 information and products, Landsat 7 metadata and inventory information, and Level 0R products archived in the LPS and IGS Data Ingest and Archiving test case (Section 12.5.1.1). | | | B120650.020$E – Following Step 890, there does not appear to be any verification that the scenes were successfully transferred. | | | |
| | | **E-ICT8** | | | | | | |

## EDC LAUNCH CRITICAL SCENARIOS

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|---|---|---|---|---|---|---|---|---|
| **E-LC-8** | **Ingest and Archive of ASTER GDS L1a/1b Post Launch Checkout Data.**<br>This scenario exercises EDAAC ECS ability to ingest and archive ASTER data provided by GDS and the U.S. ASTER team during the post launch checkout. | **Push - B090430.010$E**<br>The objective of this test is to verify the ability of the EDC ECS DAAC to ingest ASTER Level 1A and 1B data from the ASTER GDS. Verification is made to ensure that the ASTER higher level data is received, accounted for, validated, archived, and updated in the appropriate EDC ECS DAAC inventories. | | B090430.010E is a adequate test for the ingest of 1a/1b data. Test B120330.020 is a test for extracting the DAR file from the D3 tape. The scenario does not mention DAR files but it is an item that needs to be tested. This test is not adequate for fully testing the DAR file. There is no DAR request number and no distribution of the DAR file. | Review the scope of the DAR test and include portions to send the DAR acquisition and to distribute the DAR file after processing and ingesting. | **EGS9** | | |
| | | **E to E - B120330.020$E**<br>The ASTER DAR Data Ingest and Archiving test case verifies that the EDC ECS DAAC ingests and archives ASTER Level 1 data that includes the DAR observation, browse data, and associated metadata. This test case also verifies that the EDC ECS DAAC ingests and archives ancillary data. | | | | | | |
| | | **E-ICT12** | | | | | | |

# EDC LAUNCH CRITICAL SCENARIOS

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|---|---|---|---|---|---|---|---|---|
| **E-LC-9** | **Full ASTER SSI&T**<br>This scenario exercises: 1) the delivery and use of science algorithms/software; 2) delivery, inspection and infusion testing of ASTER PGEs and associated test data; 3) integration testing of ASTER V2 PGEs to include chaining for higher level products; 4) commissioning of the ASTER V2 PGEs into operations using actual ASTER data from EOS AM-1; and 5) support PGE changes and modifications to include testing, insertion and production monitoring; 6) NOAA ancillary data access; 7) DEM ingest. | **SV - TS0860.6**<br><br>The SSI&T Interface Test demonstrates the ability to insert, acquire, and update Data Algorithm Packages (DAP), Science Software Archive Packages (SSAP), Process Generation Executables (PGEEXE), DAP Ancillary Data, and SSAP updates.<br><br>A DAP is ingested via Ingest's HTML protocol. After successful validation, the DAP is inserted into the archive and its associated metadata into the inventory. When PDPS is notified of the insertion, the DAP is acquired, a PGE is 'checked out' and data are created and inserted into DSS. Data created at this time include an AP, which is stored in the inventory db only, and SSAP components and a PGEEXE, which are stored in the inventory db and the archive. An update can then be performed, where a new AP is inserted into the inventory, new SSAP components are stored in the inventory and the archive, and then old SSAP components are updated. SSI&T uses the Science Data Server Metadata Update Request to update the SSAP components that already reside in the inventory. DAP Ancillary data (AST_ANC) is then inserted from the Processing subsystem into the inventory db and the archive.<br><br>Using the Data Server Request Driver, the DAP will be acquired via FtpPush and then 'untarred' to verify it contains the correct files according to what was used to create the DAP. It will also be verified that each SSAP component was correctly archived and can be tracked via the inventory db. All server messages are logged in the appropriate MSS Event Log.<br>The GUIs will be checked against a checklist provided by the Human Factors Engineering (HFE) Group. The problem reports from the GUI Center will also be used while inspecting the GUI. | | 1. the delivery and use of science algorithms/software; TS0860.6<br>B100250.010$E - rewrite for ASTER<br>2. delivery, inspection and infusion testing of ASTER PGEs and associated test data;<br>- TS0860.6<br>- TS0405 - steps 42-48; 64-122; 126-145; 152-166<br>- TS0408 - EOS-HDF<br>- B100250.010$E - rewrite for ASTER<br>3. integration testing of ASTER V2 PGEs to include chaining for higher level products;<br>- TS0406<br>- TS0407<br>- TS0461<br>- TS0464 - basic info on how to plan and run PGE (needs work for this test)<br>4.commissioning of the ASTER V2 PGEs into operations using actual ASTER data from EOS AM-1;<br>■ B100250.010$E - steps 580-880 (operational PGE only)<br>■ support PGE changes and modifications to include testing, insertion and production monitoring;<br>• TS0860.6<br>• TS0407<br>• TS0408 - EOS-HDF<br>• TS0461 | 1) NOAA ancillary data access;<br>• Not covered by any SV/AT test<br>2) DEM ingest.<br>• Not covered by any SV/AT test | **EGS10** | | |

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| | | **SV - TS0460**<br><br>This test cases verifies that the Algorithm Integration and Test Tool (AITTL) provides the capabilities to subscribe to a Delivery Archive Package (DAP), receive a DAP from the Data Server, and request a DAP to be transferred from the Data Server to the SSI&T environment.<br><br>This test also verifies that the AITTL provides the operations staff, via a GUI, the capability to display a list of the Science Software Archive Packages (SSAPs) stored in the Science Data Server, and a list of the files for any specific SSAP in the Data Server. The AITTL will also provides the operations staff, via a GUI, the capability to display and edit the metadata for a specific SSAP. The operations staff will have the capability to store an SSAP to the Data Server.<br>This test also verifies that the operations staff can restrict update access to the Data Server. The operations staff, via a GUI, can add and delete SSAPs to/from the Data Server; and add, delete, or extract a copy of a file from the set of files comprising an SSAP. It will be possible to add an SSAP to the Data Server by manually issuing the commands or by using a script file which contains the input commands. The operations staff will have the capability to maintain additions and deletions of the SSAPs. This will be done by maintaining an update record in each SSAP. A record will be made of all the updates made | | | | | | |

| Scenario | Task/Activity/Operation | SV/AT Test Number<br>ICT Test Number<br>Operations | Status of SV/AT Test | Comments on the Expected Results, Acceptance Criteria (SV/AT) | Remarks | Relevant EGS Test | Status | Relevant Operations Procedures |
|---|---|---|---|---|---|---|---|---|
| | | **SV - TS0405**<br><br>This test verifies that the SSIT Manager interface conforms to the guidelines in version 5.1 of the ECS User Interface Style Guide. This GUI will be checked against a checklist provided by the Human Factors Engineering (HFE) Group. The problem reports from the GUI Center will also be used while inspecting the GUI.<br><br>This test also verifies that the SSIT Manager provides access to various COTS products: SPARCWorks, MSWindows, GhostView, Netscape, Acrobat, DDTS, Emacs, Xedit; to various tools: FORCHECK, Prohibited Function Checker, Process Control File Checker, Prolog Extractor, ASCII comparison, Binary comparison, HDF (GUI) comparison, HDF (hdiff) comparison. SSIT will allow xterm windows to be invoked from the GUI. EOSView and IDL can also be invoked from the SSIT Manager.The SSIT Manager checklist will also be verified. | | | | | | |
| | | **SV - TS0406**<br><br>This test verifies that a PGE can be registered with the Planning and Processing systems in the PDPS database. Using ODL files and the SSIT tools, several PGE's will be registered by populating the pdps database. Metadata parameters and values will be entered via the ODL files that are processed. Several PGE's will be registered using multiple profile id's thus allowing multiple sets of scheduling, I/O, performance and resource utilization information. Error checking will be performed by processing PGE's using PGE ODL files and ESDT ODL files that contain errors. | | | | | | |

| Scenario | Task/Activity/Operation | SV/AT Test Number<br>ICT Test Number<br>Operations | Status of SV/AT Test | Comments on the Expected Results, Acceptance Criteria (SV/AT) | Remarks | Relevant EGS Test | Status | Relevant Operations Procedures |
|---|---|---|---|---|---|---|---|---|
| | | **SV - TS0407**<br><br>This test verifies that the SSIT Database Update GUI updates the PDPS database with the performance information entered by the operator. Each GUI function will be tested/inspected for correctness. PGE profile information will be entered for a new PGE and modified for an existing PGE. The Runtime and ESDT information will be inspected.<br><br>The GUI will be inspected using inputs from the GUI Center Group and the ECS Human Factors Engineering Group (HFE). This GUI will be checked against a checklist provided by the Human Factors Engineering (HFE) Group. The problem reports from the GUI Center will also be used while inspecting the GUI. | | | | | | |
| | | **SV - TS0461**<br><br>This test case verifies that the AITTL provides the capabilities to create Tar files, containing PGE binaries and scripts, with associated metadata, and store them to the Science Data Server. This test case also verifies the capabilities to insert Static data file into the Science Data Server archive. | | | | | | |

| Scenario | Task/Activity/Operation | SV/AT Test Number<br>ICT Test Number<br>Operations | Status of SV/AT Test | Comments on the Expected Results, Acceptance Criteria (SV/AT) | Remarks | Relevant EGS Test | Status | Relevant Operations Procedures |
|---|---|---|---|---|---|---|---|---|
| | | **SV - TS0464**<br><br>This test verifies the allocation of resources needed to execute a PGE. It verifies that the computer hardware resources needed are available to support the execution of a PGE based on the computer resource information associated with the Data Processing Request ID (DPR ID).<br><br>This test also verifies that the pre-execution or the preparation of PGE execution creates a PCF and a UNIX Profile. A PGE input file is created to retain information that is needed to execute the PGE. This test case will also verifies the following items related to the PCF and PGE Execution:<br><br>• the ability to create a PCF which provides information to the SDP Toolkit CI about the input data required to execute a PGE and output data generated from the executing PGE.<br><br>• the ability to create a mapping of logical file handles to physical file handles in the PCF for the input data required to execute a PGE and for the output data produced by the PGE.<br><br>This test also verifies the execution job and the initial processing and monitoring of the execution of a PGE. Please note that the allocation of resources, data staging and preparation must be done before executing a PGE. The execution is invoked by a toolkit script to run the actual PGE on the production machine. This test also verifies the following items relating to the status message files after the execution of a PGE:<br><br>• the ability to create a Status Message File to be used by the SDP Toolkit CI to collect toolkit status and error information about the execution of a PGE**.**<br><br>• the ability to create User Status Message Files to be used by the SDP Toolkit CI during PGE execution if | | | | | | |

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| | | **SV - TS0408**<br><br>The data visualization tools provided from the SSIT Manager GUI are the COTS product Interactive Data Language (IDL), and the custom developed product EOSView. IDL provides the capability to interactively analyze and visualize data. EOSView, the custom tool developed for the ECS project provides the capability to examine and verify HDF and HDF-EOS data files. The combination of these tools provide all data visualization functionality required by the SSI&T process.<br><br>This test verifies access to these tools from the SSIT Manager GUI and the data visualization capabilities as it relates specifically to SSI&T activities. Only EOSView capability that is required for SSIT operations is addressed in this test case Additional capability that is required by EOSView in the Client (CLS) subsystem can be found in the Client Subsystem testcases. | | | | | | |
| | | **Pull - B100250.010$E** This procedure tests the EDC DAAC's Science Software Integration and Test Team's (SSITT) ability to install, verify, archive, and report on science software ingested from the MODIS SCF. Next, it verifies the user interfaces between the ECS DAAC and the MODIS SCF supports continued testing and development of science algorithms. Finally, this test verifies the MODIS SCF's ability to search, retrieve, and check-out data and algorithms from the DAAC archive. | | | | | | |
| | | **E-ICT1** | | | | | | |

# EDC LAUNCH CRITICAL SCENARIOS

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|---|---|---|---|---|---|---|---|---|
| **E-LC-10** | **Full MODIS SSI&T**<br>This scenario exercises: 1) the delivery and use of science algorithms/software; 2) delivery, inspection, and infusion testing of MODIS PGEs and associated test data; 3) integration testing of MODIS PGEs to include chaining for higher level products; 4) commissioning of the MODIS PGEs into operations using actual MODIS data from EOS AM-1; and 5) support PGE changes and modifications to include testing insertion, and production monitoring. | **SV - TS0860.6** The SSI&T Interface Test demonstrates the ability to insert, acquire, and update Data Algorithm Packages (DAP), Science Software Archive Packages (SSAP), Process Generation Executables (PGEEXE), DAP Ancillary Data, and SSAP updates.<br><br>A DAP is ingested via Ingest's HTML protocol. After successful validation, the DAP is inserted into the archive and its associated metadata into the inventory. When PDPS is notified of the insertion, the DAP is acquired, a PGE is 'checked out' and data are created and inserted into DSS. Data created at this time include an AP, which is stored in the inventory db only, and SSAP components and a PGEEXE, which are stored in the inventory db and the archive. An update can then be performed, where a new AP is inserted into the inventory, new SSAP components are stored in the inventory and the archive, and then old SSAP components are updated. SSI&T uses the Science Data Server Metadata Update Request to update the SSAP components that already reside in the inventory. DAP Ancillary data (AST_ANC) is then inserted from the Processing subsystem into the inventory db and the archive.<br><br>Using the Data Server Request Driver, the DAP will be acquired via FtpPush and then 'untarred' to verify it contains the correct files according to what was used to create the DAP. It will also be verified that each SSAP component was correctly archived and can be tracked via the inventory db. All server messages are logged in the appropriate MSS Event Log.<br>The GUIs will be checked against a checklist provided by the Human Factors Engineering (HFE) Group. The problem reports from the GUI Center will also be used while inspecting the GUI. | | 1) The delivery and use of science algorithms/software;<br>• TS0860.6<br>• B100250.010$E<br>2) Delivery, inspection, and infusion testing of MODIS PGEs and associated test data;<br>• TS0860.6<br>• TS0405 - steps 42 - 48; 64-122; 126-145; 152-166<br>• TS0408 - EOS-HDF<br>• B100250.010$E<br>3) Integration testing of MODIS PGEs to include chaining for higher level products;<br>• TS0406<br>• TS0407<br>• TS0461<br>• TS0464 - basic info on how to plan and run PGE (needs work for this test)<br>4) Commissioning of the MODIS PGEs into operations using actual MODIS data from EOS AM-1;<br>• B100250.010$E - steps 580-880 (operational PGE only)<br>5. Support PGE changes and modifications to include testing, insertion, and production monitoring.<br>• TS0860.6<br>• TSO407<br>• TS0408 - EOS-HDF<br>• TS0461 | SV and AT tests cover all aspects of the SSI&T procedures. | **EGS10** | | **Science Operations** |

| Scenario | Task/Activity/Operation | SV/AT Test Number<br>ICT Test Number<br>Operations | Status of SV/AT Test | Comments on the Expected Results, Acceptance Criteria (SV/AT) | Remarks | Relevant EGS Test | Status | Relevant Operations Procedures |
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| | | **SV - TS0460** This test cases verifies that the Algorithm Integration and Test Tool (AITTL) provides the capabilities to subscribe to a Delivery Archive Package (DAP), receive a DAP from the Data Server, and request a DAP to be transferred from the Data Server to the SSI&T environment.<br><br>This test also verifies that the AITTL provides the operations staff, via a GUI, the capability to display a list of the Science Software Archive Packages (SSAPs) stored in the Science Data Server, and a list of the files for any specific SSAP in the Data Server. The AITTL will also provides the operations staff, via a GUI, the capability to display and edit the metadata for a specific SSAP. The operations staff will have the capability to store an SSAP to the Data Server.<br>This test also verifies that the operations staff can restrict update access to the Data Server. The operations staff, via a GUI, can add and delete SSAPs to/from the Data Server; and add, delete, or extract a copy of a file from the set of files comprising an SSAP. It will be possible to add an SSAP to the Data Server by manually issuing the commands or by using a script file which contains the input commands. The operations staff will have the capability to maintain additions and deletions of the SSAPs. This will be done by maintaining an update record in each SSAP. A record will be made of all the updates made | | | | | | |
| | | **SV - TS0405** This test verifies that the SSIT Manager interface conforms to the guidelines in version 5.1 of the ECS User Interface Style Guide. This GUI will be checked against a checklist provided by the Human Factors Engineering (HFE) Group. The problem reports from the GUI Center will also be used while inspecting the GUI.<br>This test also verifies that the SSIT Manager provides access to various COTS products: SPARCWorks, MSWindows, GhostView, Netscape, Acrobat, DDTS, Emacs, Xedit; to various tools: FORCHECK, Prohibited Function Checker, Process Control File Checker, Prolog Extractor, ASCII comparison, Binary comparison, HDF (GUI) comparison, HDF (hdiff) comparison. SSIT will allow xterm windows to be invoked from the GUI. EOSView and IDL can also be invoked from the SSIT Manager. The SSIT Manager checklist will also be verified. | | | | | | |

| Scenario | Task/Activity/Operation | SV/AT Test Number<br>ICT Test Number<br>Operations | Status of SV/AT Test | Comments on the Expected Results, Acceptance Criteria (SV/AT) | Remarks | Relevant EGS Test | Status | Relevant Operations Procedures |
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| | | **SV - TS0406** This test verifies that a PGE can be registered with the Planning and Processing systems in the PDPS database. Using ODL files and the SSIT tools, several PGE's will be registered by populating the pdps database. Metadata parameters and values will be entered via the ODL files that are processed. Several PGE's will be registered using multiple profile id's thus allowing multiple sets of scheduling, I/O, performance and resource utilization information. Error checking will be performed by processing PGE's using PGE ODL files and ESDT ODL files that contain errors | | | | | | |
| | | **SV - TS0407** This test verifies that the SSIT Database Update GUI updates the PDPS database with the performance information entered by the operator. Each GUI function will be tested/inspected for correctness. PGE profile information will be entered for a new PGE and modified for an existing PGE. The Runtime and ESDT information will be inspected.<br>The GUI will be inspected using inputs from the GUI Center Group and the ECS Human Factors Engineering Group (HFE). This GUI will be checked against a checklist provided by the Human Factors Engineering (HFE) Group. The problem reports from the GUI Center will also be used while inspecting the GUI. | | | | | | |
| | | **SV - TS0461** This test case verifies that the AITTL provides the capabilities to create Tar files, containing PGE binaries and scripts, with associated metadata, and store them to the Science Data Server. This test case also verifies the capabilities to insert Static data file into the Science Data Server archive | | | | | | |

| Scenario | Task/Activity/Operation | SV/AT Test Number<br>ICT Test Number<br>Operations | Status of SV/AT Test | Comments on the Expected Results, Acceptance Criteria (SV/AT) | Remarks | Relevant EGS Test | Status | Relevant Operations Procedures |
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| | | **SV - TS0464**<br><br>This test verifies the allocation of resources needed to execute a PGE. It verifies that the computer hardware resources needed are available to support the execution of a PGE based on the computer resource information associated with the Data Processing Request ID (DPR ID).<br><br>This test also verifies that the pre-execution or the preparation of PGE execution creates a PCF and a UNIX Profile. A PGE input file is created to retain information that is needed to execute the PGE. This test case will also verifies the following items related to the PCF and PGE Execution:<br><br>• the ability to create a PCF which provides information to the SDP Toolkit CI about the input data required to execute a PGE and output data generated from the executing PGE.<br><br>• the ability to create a mapping of logical file handles to physical file handles in the PCF for the input data required to execute a PGE and for the output data produced by the PGE.<br><br>This test also verifies the execution job and the initial processing and monitoring of the execution of a PGE. Please note that the allocation of resources, data staging and preparation must be done before executing a PGE. The execution is invoked by a toolkit script to run the actual PGE on the production machine. This test also verifies the following items relating to the status message files after the execution of a PGE:<br><br>• the ability to create a Status Message File to be used by the SDP Toolkit CI to collect toolkit status and error information about the execution of a PGE**.**<br><br>• the ability to create User Status Message Files to be used by the SDP Toolkit CI during PGE execution if | | | | | | |

| Scenario | Task/Activity/Operation | SV/AT Test Number<br>ICT Test Number<br>Operations | Status of SV/AT Test | Comments on the Expected Results, Acceptance Criteria (SV/AT) | Remarks | Relevant EGS Test | Status | Relevant Operations Procedures |
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| | | **SV - TS0408**<br>The data visualization tools provided from the SSIT Manager GUI are the COTS product Interactive Data Language (IDL), and the custom developed product EOSView. IDL provides the capability to interactively analyze and visualize data. EOSView, the custom tool developed for the ECS project provides the capability to examine and verify HDF and HDF-EOS data files. The combination of these tools provide all data visualization functionality required by the SSI&T process.<br>This test verifies access to these tools from the SSIT Manager GUI and the data visualization capabilities as it relates specifically to SSI&T activities. Only EOSView capability that is required for SSIT operations is addressed in this test case Additional capability that is required by EOSView in the Client (CLS) subsystem can be found in the Client Subsystem test cases | | | | | | |
| | | **Pull - B100250.010$E**<br>This procedure tests the EDC DAAC's Science Software Integration and Test Team's (SSITT) ability to install, verify, archive, and report on science software ingested from the MODIS SCF. Next, it verifies the user interfaces between the ECS DAAC and the MODIS SCF supports continued testing and development of science algorithms. Finally, this test verifies the MODIS SCF's ability to search, retrieve, and check-out data and algorithms from the DAAC archive. | | | | | | |
| | | **E-ICT1** | | | | | | |

## EDC LAUNCH CRITICAL SCENARIOS

| Scenario | Task/Activity/Operation | SV/AT Test Number<br>ICT Test Number<br>Operations | Status of SV/AT Test | Comments on the Expected Results, Acceptance Criteria (SV/AT) | Remarks | Relevant EGS Test | Status | Relevant Operations Procedures |
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| **E-LC-11** | **System Administration**<br>This scenario exercises: 1) the ability to manage the DCE cell for the EDAAC ECS including the exercise of add, delete, and edit capabilities; 2) management of UNIX user accounts; and 3) other system management, system network, and system administrative capabilities; 4) monitor of error logs integrated fashion. | **SM - B080110.010$E**<br>This test verifies the existence and accessibility of documented operational and maintenance policies and procedures. | | | 1. No test for DCE cell management. Tests include only DCE server up & down, and log in.<br>2. User account management and security covered in tests.<br>3. Tests include some system management and administrative capability, e.g. ftp/ip, mail, print and backup/restore; but does not include capabilities like event log, network file systems, add/remove disk drive, etc.<br>4. Tests cover error log. | **EGS5**<br>**EGS9**<br>**EGS10** | | **System Management** |
| | | **SM - B080110.020$E** This test verifies that the ECS hardware and software configuration items are on the system. | | | | | | |
| | | **SM - B080120.010$E** The purpose of this test is to demonstrate a normal startup, operations and shutdown of the ECS site. This test also demonstrates the ability of the ECS to perform a warm restart and demonstrates that configuration inputs from the prior operational state are still active following a shutdown and restart process. | | **SM - B080120.010$E**<br>DCE (Server up and down only) | | | | |
| | | **SM - B080130.020$E** This test verifies the ability of the LSM to start up and shut down managed applications. Application event recording and alert generation are also verified, along with the capability to monitor the status of managed applications. | | | | | | |
| | | **SM - B080130.020$E** This test verifies the ability of the LSM to start up and shut down managed applications. Application event recording and alert generation are also verified, along with the capability to monitor the status of managed applications. | | | | | | |

| Scenario | Task/Activity/Operation | SV/AT Test Number<br>ICT Test Number<br>Operations | Status of SV/AT Test | Comments on the Expected Results, Acceptance Criteria (SV/AT) | Remarks | Relevant EGS Test | Status | Relevant Operations Procedures |
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| | | **SM - B080140.010$E** This confirms that the site's standard procedures contain methodology for responding to catastrophic situations that require immediate site shutdown and for other types of abnormal shutdown such as system critical equipment failure. This test also verifies that the ECS site can recover from an emergency shutdown. | | **SM - B080140.010$E** DCE (automount only) | | | | |
| | | **SM - B080140.010$E** This confirms that the site's standard procedures contain methodology for responding to catastrophic situations that require immediate site shutdown and for other types of abnormal shutdown such as system critical equipment failure. This test also verifies that the ECS site can recover from an emergency shutdown. | | | | | | |
| | | **SM - B080140.020$E** This test confirms the sites ability to restore files caused by an abnormal non-catastrophic shutdown using standard operational procedures and that the FSMS can continue to provide service in the event of a device failure. | | **SM - B080140.020$E** System backup and restore | | | | |
| | | **SM - B080150.010$E** Demonstrate that M&O interfaces, provided for EDC ECS DAAC subsystems are accessible and functioning and that these interfaces are sufficient to support planned operations and maintenance activities. | | **SM - B080150.010$E** ECS user account management and tcp/ip | | | | |
| | | **SM - B080150.020$E** Demonstrate that interfaces between the ECS Subsystem Servers and their respective M&O Administrative terminal(s) support Maintenance of ECS Data bases (DB). Demonstrate that maintenance of ECS DBs do not require a "change" of display screens after modification of data base structures provided by ECS DB servers. Demonstrate capabilities to interrupt maintenance session and restart the session without loss of information. Verify through Inspection that EDC LSM data base maintenance capabilities reflect cross site standards for maintenance of ECS Data bases. | | **SM - B080150.020$E** tcp/ip | | | | |
| | | **E to E - B120110.020$E** The System Start-up test procedure ensures that the EDC ECS DAAC is able to prepare the system for a full day of ingest, archive, and distribution. | | | | | | |

| Scenario | Task/Activity/Operation | SV/AT Test Number<br>ICT Test Number<br>Operations | Status of SV/AT Test | Comments on the Expected Results, Acceptance Criteria (SV/AT) | Remarks | Relevant EGS Test | Status | Relevant Operations Procedures |
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| | | **E to E - B120110.010$E**<br>The ECS DAAC, EOC and SMC Communications test procedure verifies the capabilities of the ECS DAACs to sequentially send messages among themselves and to the SMC, and also to receive and process acknowledgments of proper message receipt. Each ECS DAAC user/operator sequentially and then concurrently broadcasts data request messages to each of the other three DAACs and to the SMC. This test procedure also verifies the capability of the EOC to send sequential messages to each ECS DAAC. An EOC operator establishes communications with the four DAACs, sends a set of sequential messages to each, and confirms proper message receipts and acknowledgments. The interfaces between the DAACs and the EOC are also tested. Communication between EOC and SMC is verified | | | | | | |
| | | **E to E - B120110.010$E** The ECS DAAC, EOC and SMC Communications test procedure verifies the capabilities of the ECS DAACs to sequentially send messages among themselves and to the SMC, and also to receive and process acknowledgments of proper message receipt. Each ECS DAAC user/operator sequentially and then concurrently broadcasts data request messages to each of the other three DAACs and to the SMC. This test procedure also verifies the capability of the EOC to send sequential messages to each ECS DAAC. An EOC operator establishes communications with the four DAACs, sends a set of sequential messages to each, and confirms proper message receipts and acknowledgments. The interfaces between the DAACs and the EOC are also tested. Communication between EOC and SMC is verified.. | | | | | | |
| | | **E to E - B120110.010$E** The ECS DAAC, EOC and SMC Communications test procedure verifies the capabilities of the ECS DAACs to sequentially send messages among themselves and to the SMC, and also to receive and process acknowledgments of proper message receipt. Each ECS DAAC user/operator sequentially and then concurrently broadcasts data request messages to each of the other three DAACs and to the SMC. This test procedure also verifies the capability of the EOC to send sequential messages to each ECS DAAC. An EOC operator establishes communications with the four DAACs, sends a set of sequential messages to each, and confirms proper message receipts and acknowledgments. The interfaces between the DAACs and the EOC are also tested. Communication between EOC and SMC is verified | | | | | | |
| | | **SM - B080160.020$E** The purpose of the test is to confirm the site's capability to store, archive, and backup data. | | | | | | |
| | | **SM - B080170.010$E**<br>This test identifies and verifies various interface protocol standards available for communications between various elements of ECS. | | | | | | |

| Scenario | Task/Activity/Operation | SV/AT Test Number<br>ICT Test Number<br>Operations | Status of SV/AT Test | Comments on the Expected Results, Acceptance Criteria (SV/AT) | Remarks | Relevant EGS Test | Status | Relevant Operations Procedures |
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| | | **SM - B080170.020$E** This test case verifies EDC ECS DAAC connectivity with ECS external systems using the File Transfer Protocol. | | **SM - B080170.020$E** ftp | | | | |
| | | **SM - B080170.030$E** This test case verifies the capability for the EDC ECS DAAC to communicate with the GSFC, LaRC, NSIDC, SMC and EOC using representative data samples of the actual data types to be used during normal operations of the system as input. | | | | | | |
| | | **SM - B080170.040$E** This test case verifies the capability for the EDC ECS DAAC to communicate with the GSFC, LaRC, NSIDC, SMC and EOC using Electronic Mail Services. | | **SM - B080170.040$E** e-mail | | | | |
| | | **SM - B080610.010$E** The Network Status Test confirms the ability of the LSM staff to obtain configuration management information and the status of network resources, including data flow status information. Services provided by ECS include collecting information describing the state of the network subsystem and its communications resources. This test also verifies the ability to perform management functions which exercise control over the network configuration, parameters, and resources. These functions include access to and manipulation of network resources. | | **SM - B080610.010$E** network | | | | |
| | | **SM - B080610.030$E** The purpose of this test is to verify the functionality of the Directory/Naming Service. The Directory/Naming Service uniquely associates a name with resources/principals, either physical or logical, along with some information so they can be identified and located by the name even if the named resource changes its physical address over time.. | | **SM - B080610.030$E** DCE (log in only) and printer | | | | |
| | | **SM - B080610.040$** This test confirms the ability of the ECS network to provide the Electronic Messaging and Bulletin Board Services to each ECS site. The Electronic Messaging Service provides the capability to manage electronic mail messages to its users and applications | | | | | | |
| | | **SM - B080620.010$E** This test verifies the fault management requirements for the disk archive and distribution subsystem of the ECS. Simulated faults are induced in the subsystem to verify fault detection, fault isolation and reporting. Using simulated fault situations (such as non-compliance of on-demand or scheduled data request event) covering both the system-wide and site level faults, the resource managers discovers a fault while monitoring the system. | | **SM - B080620.010$E** error log | | | | |

| Scenario | Task/Activity/Operation | SV/AT Test Number<br>ICT Test Number<br>Operations | Status of SV/AT Test | Comments on the Expected Results, Acceptance Criteria (SV/AT) | Remarks | Relevant EGS Test | Status | Relevant Operations Procedures |
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| | | **SM - B080620.020$E** This test verifies the fault management requirements for the communications subsystem of the ECS. Simulated faults are induced in the subsystem to verify fault detection, fault isolation and reporting. Using a simulated network fault (e.g. configuration errors, protocol errors, communications hardware errors, performance degradation conditions, and telecommunications errors and failures) as input for this test, the resource manager monitors the ECS network and receives a fault indication. | | **SM - B080620.020$E** error log | | | | |
| | | **SM - B080630.010$E** The objective of this test is to verify the LSM ability to control user access and prevention of data corruption resulting from unauthorized access. | | **SM - B080630.010$E** management of user account | | | | |
| | | **SM - B080630.020$E** The objective of this test is to verify the LSM security functions; such as maintaining, authenticating, and monitoring user and device accesses and privileges; performing security testing that includes, password auditing and site internal access/privileges checking; performing compromise detection (e.g. virus or worm penetration); and performing risk detection and analyses. | | | | | | |

**SM - B080710.020$E** This test verifies the LSM's ability to track ECS resource usage, update user account information, and dispose of accounting functions.**E-LC-12_ESDT Addition/Modification, and Search, and Distribution**This scenario exercises: 1) the creation of a new system ESDT; 2) the creation of a new science product ESDT; 3) the evaluation of proposed ESDTs using EDAAC ECS test mode; 4) the commission of new ESDTs into operations; 5) search of all ESDT data types in EDAAC ECS using the ECS Client; 6) order of a sample of each ESDT using the Client; 7) distribution of samples via pull ftp, push ftp, and 8 mm tape; and 8) inspection of samples using Client and other HDF inspection tools.**SV - TS0840.1** This test demonstrates the capability to view all data types and their associated services in the Science Data Server. Representations for data server data objects (Earth Science Data Types - ESDTs) are displayed. Information from the ESDT-specific descriptor file includes product specific, granule and collection level attribute values, and services associated with that ESDT. Descriptor files for several ESDTs are printed and compared with the information displayed via the GUI. This test assumes ESDTs have previously been added to Science Data Server.This scenario exercises:The creation of a new system ESDT; TS0840.2 - steps 4 - 18 needs to be rewritten for a PGE ESDT not a data product.The creation of a new science product ESDT; TS0840.2 - steps 4 - 18 Search of all ESDT data types in EDAAC ECS using the ECS Client; TS0840.1 - view ESDT via DSS (Data Server) GUIDistribution of samples via pull ftp, push ftp, and 8 mm tape; TS0840.2 - steps 52-65The evaluation of proposed ESDTs using EDAAC ECS test mode;Not covered by any SV/AT testThe commission of new ESDTs into operations; Not covered by any SV/AT testOrder of a sample of each ESDT using the Client; Not covered by any SV/AT testInspection of samples using Client and other HDF inspection tools.Not covered by any SV/AT test**EGS10Science OperationsSV - TS0840.2** This test demonstrates the ability of the data server to provide new data type information to the data base when a new data type is added to a running Science Data Server. New ESDTs are added via the Data Server GUI (DSSGUI) 'Data Types' screen. Information specified on the GUI include ESDT ShortName, Version ID, Descriptor filename/path, DLL filename/path, and the desired Archive ID (ESDT Description is currently not implemented). Upon execution of the GUI screen, the descriptor file is validated. When it passes this validation, information is added to the appropriate tables in the Inventory Data base, and to the appropriate DSS-internal data dictionary files (Attribute/Content). The Descriptor file and the DLL are moved to the appropriate directories, as specified in the configuration file, and an event file is created and placed in the cfg directory. Collection level information is then sent to the Data Management subsystem for use in identifying Valids information. Advertisements are created to identify new data type information including available services and product information. The Subscription Server is also notified when a new data type is added, and creates the appropriate events, which are also advertised. All advertisements must be 'accepted' via the Advertising WEB page. Error testing includes attempting to insert a data type that is already in the database, specifying DLL and descriptor files that can't be found, specifying DLL and descriptor files that are not in the correct formats, specifying an incompatible ShortName on the input screen (as compared with the DLL and descriptor files), specifying a version number that is not compatible with that specified in the descriptor file, and adding several ESDTs successively, each time with a different external subsystem not up and running. This test will also demonstrate that several GUIs can be brought up at one time and updated, via the refresh button, with data entered on another GUI. This test includes adding a new ESDT, verifying the correct information was added in the appropriate places in the data base, verifying the correct information was sent to the appropriate subsystems, creating a subscription to the new data type, and inserting a granule of the new data type into the archive via the data server request driver. ESDTs used in this test case reference the Release B data model. Subscriptions to be created include notification only, FtpPush, FtpPull, and 8mm actions, meaning when the appropriate data is received, either the user will be notified via e-mail, or an FtpPull/Push or 8mm acquire will be initiated as well as the e-mail notification. In addition, qualified subscriptions will be created, where not only receipt of data will trigger a subscription, but receipt of 'special' data will trigger the subscription. Special data can be data based on a given time, data with a given xarID, or data that satisfies a number of other ESDT attributes. All subscriptions are based on subscribable events as identified in the Subscription/Advertising servers. More information will be added to this section after working in the RCC lab later this week, and the web updated next week (8/22). Three test ESDTs have been created and will be used during this test. If they already reside in the system, or if more ESDTs are needed, a script can be run that will purge information for a given ESDT, so the SDSRV has no knowledge of it, and the ESDT can then be re-added using the

**E-LC-13_Mode Management for Operations, SSI&T, and Test.**This scenario exercises: 1) the use of mode management to conduct simultaneous operations and test activities; and 2) the use of mode management to conduct simultaneous operations and SSI&T activities; and 3) the use of mode management to support ECS custom code upgrades without downtime.**SV - TC0113** Mode management allows the operational staff to perform testing while operational activities continue uninterrupted. Mode management enables the execution of multiple modes, such that each mode functions without interfering with the other modes and each mode maintains integrity throughout it's execution such as, testing a data server application within the same system that is supporting the operational activities. The test copy of the data server must not interfere/interact with the operational copy of the data server on both data and process levels. In addition, it will only see and have access to interface components that have been specifically setup and initiated under the test mode. Operational process can never read from read from test data sets and test data can never be written to production data sets. The SV tests appear to completely cover the scenario stated. Provides some error checking on SSI&T inputs and end-

to-end fault management._All the parts identified in the scenario, have been sufficiently addressed by the SV and AT tests._**EGS10__System Management____SV - TS0700.1**This test demonstrates the ability to establish a network connection between an External Data Provider and an ECS DAAC for ingest of a series of data collections, including collections containing single and multiple granules of data. The External Data Provider establishes a connection to the Gateway at the DAAC and sends an Authentication Request. After receiving the Authentication Response, Data Availability Notices (DANs) are sent to initiate the ingest of data. The DANs are received and validated and DAAs are sent to the External Data Provider. Upon validation, the data is retrieved from the External Data Provider via ftp and placed in a pre-allocated Working Storage location. Core metadata is then extracted and the data is converted to and ECS acceptable format if necessary. The Science Data Server (SDSRV) UR for the particular data type being ingested is retrieved from memory and an insert request is submitted to the SDSRV for data archiving. The insert request is accepted and validated by the SDSRV. The core metadata is validated and the data is placed into the archive location that has been allocated. The Inventory database is then updated with the core metadata and a Data Delivery Notice is sent to the External Data Provider. The External Data Provider responds by sending a Data Delivery Acknowledgment (DDA) to the DAAC. The Ingest database is updated during the ingest process to reflect the status of the Ingest Requests. This information can be viewed using either the Monitor/Control function (real-time) or History Log (post-real-time) functions of the Ingest GUI. Ingest events will be recorded in the MSS Event Log._____**SV - TS0700.2** This test demonstrates the ability to recognize and respond to error conditions encountered during ingest of data via the Auto Network Interface protocol. Error testing performed includes the following:invalid authentication requestvalid authentication requestfile transfer failurefile size discrepanciesinvalid data typemissing required metadatametadata parameters out of rangefailure to archive datamissing required request informationunauthorized ingest request submittermetadata syntax errorinvalid month, day, hour, minute, second in date/time value in metadatainvalid year in date/time value in metadatasuccessful archiveThe Ingest subsystem returns status to the external data provider. All errors are recorded in the MSS Event Log._____**SV - TS0460**This test cases verifies that the Algorithm Integration and Test Tool (AITTL) provides the capabilities to subscribe to a Delivery Archive Package (DAP), receive a DAP from the Data Server, and request a DAP to be transferred from the Data Server to the SSI&T environment. This test also verifies that the AITTL provides the operations staff, via a GUI, the capability to display a list of the Science Software Archive Packages (SSAPs) stored in the Science Data Server, and a list of the files for any specific SSAP in the Data Server. The AITTL will also provides the operations staff, via a GUI, the capability to display and edit the metadata for a specific SSAP. The operations staff will have the capability to store an SSAP to the Data Server.This test also verifies that the operations staff can restrict update access to the Data Server. The operations staff, via a GUI, can add and delete SSAPs to/from the Data Server; and add, delete, or extract a copy of a file from the set of files comprising an SSAP. It will be possible to add an SSAP to the Data Server by manually issuing the commands or by using a script file which contains the input commands. The operations staff will have the capability to maintain additions and deletions of the SSAPs. This will be done by maintaining an update record in each SSAP. A record will be made of all the updates made._____**SV - TS0445** This test verifies the capability of PDPS to execute in both operational and test mode simultaneously and maintain data integrity. Each application must register within their mode-associated namespace prior to execution. A mode identifier must be incorporated for CSS name service lookups for the application to run in test mode. PDPS will be running in operational mode. A test mode will be brought up utilizing the same machines for the same functions, and then with different machines. This test mode will be run utilizing Algorithm Integration and Test activities.This test will not use any interfaces outside of PDPS._____**SM - B080810.010$E** Ensure that mode management facilitate execution of modes and maintains logical and operational separation between non-production (test or training) modes and the site production mode. Assure that mode management capabilities allow staff to observe run-time state conditions along with the mode status. Ensure that the test and run time conditions caused by a mode are compatible with the site's production environment and introduces no adverse impacts to planed activities for the site._____**E to E - B120110.050$E** The End-to-End Fault Management test procedure initializes the capabilities of each ECS element to support end-to-end system testing and fault isolation, as well as the capability to monitor the performance of each ECS element during testing. The Management Subsystem (MSS) Fault Management Application Service will be demonstrated as the primary fault detection capability._____**E-LC-14_Distribution of ETM+ LOR and ASTER L1a/1b to ITs.**This scenario exercises capability of EDAAC ECS to distribute data via FTP and 8mm tapes._**SV - TS0890.8** This test demonstrates the ability for users to perform the following functions:Users ability create data requests for data products.Users ability to view the data requests recorded in the user session log.Users ability to retrieve any previously saved data requests parameters into a new data request, edit the parameters, save the modified parameters, and/or submit the new data requests.The B0SOT will be used for this test. Search Results will be compared to the manual search of the database. Data will be pushed, pulled, placed on media (according to B0SOT capabilities) and in some cases compare to the user's workstation to justify that the data is okay.Error conditions include Data Requests for data that is not in the user's data collection requests for non-existent data types and non -available media types..___TS0890.8 -- Steps 20 and 32 state, "Verify that the data is okay." However, no criteria are provided for determining whether the data files are "okay."B100250.050$E – This test could not be located and therefore was not reviewed.B120330.050$E -- Step 70 Verify necessary servers are up and running," but it does not say which servers are necessary.Steps 210, 380, 540, and 700 state, "Copy files to home directory for verification," but nowhere thereafter is it verified that the data files received actually contain the requested data.There is no verification that the D3 tape produced in steps 740-800 is actually readable and contains the correct data._**EGS5EGS9__System Operations____SV - TS0890.8** This test demonstrates the ability for users to perform the following functions:Users ability create data requests for data products.Users ability to view the data requests recorded in the user session log.Users ability to retrieve any previously saved data requests parameters into a new data request, edit the parameters, save the modified parameters, and/or submit the new data requests.The B0SOT will be used for this test. Search Results will be compared to the manual search of the database. Data will be pushed, pulled, placed on media (according to B0SOT capabilities) and in some cases compare to the user's workstation to justify that the data is okay.Error conditions include Data ._____**E to E - B120330.050$E** The ASTER DAR Product Distribution test case verifies that the EDC DAAC distributes the AST09 product and associated metadata to the customers specified in the DAR. The inputs to this test case include the AST09 product itself and associated metadata_____**E-LC-15_Server failure recovery**This scenario exercises 1) EDAAC ECS system work around and recovery from server failures; 2) delivery, ingest, and archive of data after an extended down time of an ECS server; and 3) processing of data in a catch up environment._**E to E - B120110.050$E**The End-to-End Fault Management test procedure initializes the capabilities of each ECS element to support end-to-end system testing and fault isolation, as well as the capability to monitor the performance of each ECS element during testing. The Management Subsystem (MSS) Fault Management Application Service will be demonstrated as the primary fault detection capability.__The test specified tests the monitoring of events leading up to the failure. The operator can then correct the failure and reset the system. _There is no testing of the system to recover from extended downtime by ingesting and archiving of data. There is also no testing of the system using a catch up mode._**EGS10__System Operations__E-LC-16 _Core Infrastructure and Systems Management**This scenario exercises: 1) use of monitoring resource tools (HP Openview and Tivolli), 2) using system problem reporting tools; 3) use of trouble reporting tools (Remedy); 4) use of configuration management tools (DDTS); 5) use of resource planning tools; and 6) web/mail server interface._**SM - B080110.010$E**This test verifies the existence and accessibility of documented operational and maintenance policies and procedures.___Use of HP Openview is covered well in the tests. Only test related to Tivoli is to bring the Tivoli server up and bring it downOnly problem reporting tool covered in the test is Remedy.Access and use of Remedy is covered in the tests.Access to ClearCase, DDTS and XRP II is covered in the tests.Test of Resource Planning tools not covered in the tests.Web and e-mail interface is covered in the tests._**EGS7EGS10__System Management____SM - B080110.020$E** This test verifies that the ECS hardware and software configuration items are on the system._____**SM - B080120.010$E** The purpose of this test is to demonstrate a normal startup, operations and shutdown of the ECS site. This test also demonstrates the ability of the ECS to perform a warm restart and demonstrates that configuration inputs from the prior operational state are still active following a shutdown and restart process.__**SM - B080120.010$E**ClearCase server up and down_____**SM - B080130.020$E** This test verifies the ability of the LSM to start up and shut down managed applications. Application event recording and alert generation are also verified, along with the capability to monitor the status of managed applications._____**SM - B080140.010$E** This confirms that the site's standard procedures contain methodology for responding to catastrophic situations that require immediate site shutdown and for other types of abnormal shutdown such as system critical equipment failure. This test also verifies that the ECS site can recover from an emergency shutdown__**SM - B080140.010$E**Tivoli server up and down, ClearCase server up and down_____**SM - B080140.020$E** This test confirms the sites ability to restore files caused by an abnormal non-catastrophic shutdown using standard operational procedures and that the FSMS can continue to provide service in the event of a device failure._____**SM - B080150.010$E** Demonstrate that M&O interfaces, provided for EDC ECS DAAC subsystems are accessible and functioning and that these interfaces are sufficient to support planned

operations and maintenance activities.__**SM - B080150.010$E**Remedy, ClearCase, DDTS, XRP II, and web access_____**SM - B080150.020$E** Demonstrate that interfaces between the ECS Subsystem Servers and their respective M&O Administrative terminal(s) support Maintenance of ECS Data bases (DB). Demonstrate that maintenance of ECS DBs do not require a "change" of display screens after modification of data base structures provided by ECS DB servers. Demonstrate capabilities to interrupt maintenance session and restart the session without loss of information. Verify through Inspection that EDC LSM data base maintenance capabilities reflect cross site standards for maintenance of ECS Data bases._____**SM - B080160.020$E** The purpose of the test is to confirm the site's capability to store, archive, and backup data._____**SM - B080170.020$E** This test case verifies EDC ECS DAAC connectivity with ECS external systems using the File Transfer Protocol._____**SM - B080170.030$E** This test case verifies the capability for the EDC ECS DAAC to communicate with the GSFC, LaRC, NSIDC, SMC and EOC using representative data samples of the actual data types to be used during normal operations of the system as input._____**SM - B080170.040$E** This test case verifies the capability for the EDC ECS DAAC to communicate with the GSFC, LaRC, NSIDC, SMC and EOC using Electronic Mail Services.__**SM - B080170.040$E**e-mail_____**SM - B080610.010$E** The Network Status Test confirms the ability of the LSM staff to obtain configuration management information and the status of network resources, including data flow status information. Services provided by ECS include collecting information describing the state of the network subsystem and its communications resources. This test also verifies the ability to perform management functions which exercise control over the network configuration, parameters, and resources. These functions include access to and manipulation of network resources._____**SM - B080610.030$E** The purpose of this test is to verify the functionality of the Directory/Naming Service. The Directory/Naming Service uniquely associates a name with resources/principals, either physical or logical, along with some information so they can be identified and located by the name even if the named resource changes its physical address over time._____**SM - B080610.040$** This test confirms the ability of the ECS network to provide the Electronic Messaging and Bulletin Board Services to each ECS site. The Electronic Messaging Service provides the capability to manage electronic mail messages to its users and applications._____**SM - B080620.010$E** This test verifies the fault management requirements for the disk archive and distribution subsystem of the ECS. Simulated faults are induced in the subsystem to verify fault detection, fault isolation and reporting. Using simulated fault situations (such as non-compliance of on-demand or scheduled data request event) covering both the system-wide and site level faults, the resource managers discovers a fault while monitoring the system._____**SM - B080620.020$E** This test verifies the fault management requirements for the communications subsystem of the ECS. Simulated faults are induced in the subsystem to verify fault detection, fault isolation and reporting. Using a simulated network fault (e.g. configuration errors, protocol errors, communications hardware errors, performance degradation conditions, and telecommunications errors and failures) as input for this test, the resource manager monitors the ECS network and receives a fault indication._____**SM - B080630.010$E** The objective of this test is to verify the LSM ability to control user access and prevention of data corruption resulting from unauthorized access. _____**SM - B080630.020$E** The objective of this test is to verify the LSM security functions; such as maintaining, authenticating, and monitoring user and device accesses and privileges; performing security testing that includes, password auditing and site internal access/privileges checking; performing compromise detection (e.g. virus or worm penetration); and performing risk detection and analyses._____**SM - B080710.010$E** This test verifies LSM SA’s ability to track and audit configuration accountability of ECS hardware and software._____**SM - B080710.020$E** This test verifies the LSM’s ability to track ECS resource usage, update user account information, and dispose of accounting functions._____